

**IN THE CLAIMS:**

Please cancel claims 1 - 17.

Please add the following new claims:

18. An arrangement for controlling a shape of a stent body comprising an electrical circuit for establishing an electrical current flow through the stent for heating the stent to cause the stent to shift from a martensite phase to an austenite phase thereby changing the shape of the stent body, the electrical circuit further being adapted to monitor a phase change of the stent and to control the flow of electrical current through the stent as a function of monitoring the phase change of the stent.
19. The arrangement of claim 18, wherein the electrical circuit includes a device for sensing a change in voltage across the stent to indicate the phase change.
20. The arrangement of claim 18, wherein the electrical circuit includes a device for sensing a change in current through the stent to indicate the phase change.
21. The arrangement of claim 19, wherein the electrical circuit further includes a device for cutting off the supply of electrical current to the stent immediately upon sensing the change in voltage
22. The arrangement of claim 20, wherein the electrical circuit further includes a device for cutting off the supply of electrical current to the stent immediately upon sensing the change in current.
23. The arrangement of claim 19, wherein the electrical circuit further includes a device for cutting off the supply of electrical current to the stent a predetermined time interval after sensing the change in voltage.

24. The arrangement of claim 20, wherein the electrical circuit further includes a device for cutting off the supply of electrical current to the stent a predetermined time interval after sensing the change in current.
25. The arrangement of claim 18, wherein the electrical circuit comprises at least one resistance therein selected as a function of a resistivity of the stent.
26. The arrangement of claim 18, wherein the electrical circuit comprises at least one resistance therein selected as a function of a thermal conductance of the stent.